

Patent Abstracts of Japan

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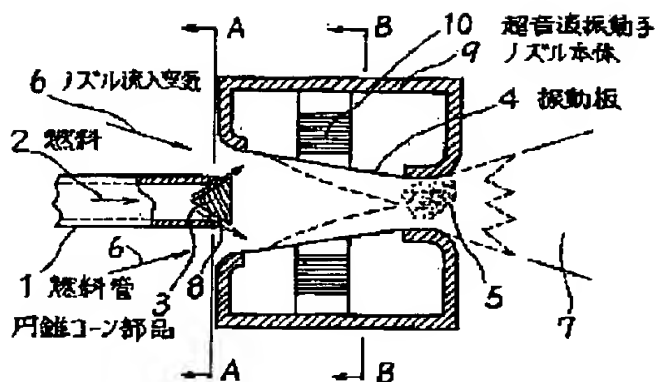
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TITLE : FINE PARTICLE FUEL INJECTION  
NOZZLE



ABSTRACT : PURPOSE: To provide a fine particle fuel injection nozzle for use in injecting fuel of a gas turbine engine so as to make a uniform fine particle of fuel liquid droplets.

CONSTITUTION: Fuel 2 within a fuel pipe 1 is radiated by a conical cone element 3 into a nozzle main body 3 in a conical form, strikes against an inner wall of a cylindrical vibrating plate 4 and becomes fine particle fuel 5 together with air 6 flowing through a nozzle and then the fuel is ignited at a fuel/air mixing region 7. A vibrating plate 5 is vibrated in a radial direction with ultrasonic vibrating element 10 so as to assist decomposition and fine particle formation of liquid droplets of the struck fuel 2 and to form a uniform liquid particle diameter, so that it is possible to select the most suitable frequency and get a uniform particle diameter by changing a vibrating frequency in response to a flow rate of the fuel.

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